REMARKS

Specification

1. The abstract has been abbreviated to be less than 150 words.

2. In the 2nd paragraph in the section "DETAILED DESCRIPTION OF PREFERRED EMBODIMENT" of the Specification, "f0" has been changed to "fc", "f1" has been changed to "f0" and "f2" has been changed to "f1" in accordance with the Office Action suggestion.

Claim objections are overcome

3. Claims 1 and 9-12 have been amended in accordance to the Office Action's suggestion. Accordingly, the objections are now moot.

4. Applicant has rewritten claims 4 and 13 in independent form.

Claim rejections under 35 USC§101 are overcome

5. Claim 1 is amended to comprise a step "transforming a series of binary digits into a sequence of pulse groups...." Claim 2 is rewritten in independent form and comprises several steps. Thus, the amended claims 1-2 are directed to processes or methods and therefore statutory subject matter.

Claim rejections under 35 USC§112 are overcome

7-8. Applicant believes that the currently amended claims 1-3 have overcome these rejections.

Claim rejections under 35 USC§102 are overcome

9-10. Claims 1-3, 9 and 11 are rejected as being anticipated by Crimmins et al. In particular, the Office Action recites Figures 9A and 9B in Crimmins et al. and

asserts that the binary digit "0" and "1" therein correspond to the two pulse groups with two special defined pulse frequencies respectively and have the same defined number of pulses.

To the extent that the rejections may be applied to the amended claims, Applicant respectfully traverses. According to Crimmins et al, "a constant 20 kilohertz square wave for 1.6 milliseconds is representative of the "0" bit in Fig. 9A." (Col. 11, ll. 58-60). Additionally, "an initial 20 kilohertz square wave for 800 microseconds, followed by 800 microseconds of a 10 kilohertz square is representative of a "1" bit in Fig. 9B" (Col. 11, ll. 60-63). Accordingly, the number of pulses of square wave for the "0" bit is 32 (1.6msX20 KHz = 32); while the number of pulses of square wave for the "1" bit is 24 (0.8msX20KHz+0.8msX10KHz=24). Therefore, the number of pulses for the "0" bit is not the same as the number of pulses for the "1" bit in Crimmins et al. In other words, Crimmins et al do not teach the limitation "the same defined number of pulses."

It appears that the number of pulses in Fig. 9A is 12 and so is the number of pulses in Fig. 9 B. However, both figures are schematic diagrams and do not correspond the true number of pulses for the "0" bit or "1" bit, which is 32 and 24 respectively. The conclusion that the number of pulse as shown in Fig. 9A is not the true number of pulses for the "0" bit is further confirmed in Fig. 9C, where for the same "0" bit the number of pulses in Fig. 9C is 14.

In light of the foregoing, Crimmins et al. do not teach that the "0" bit and "1" bit have the same numbers of pulses. Applicant respectfully requests that the rejections be reconsidered and withdrawn.

Claim rejections under 35 USC§103 are overcome

11-12. Claim 10 is rejected under 35 U.S.C. 103(c) as being unpatentable over Crimmins et al. in view of Crowley.

It is established that the four factual inquires for determining obviousness are:

1) determining the scope and contents of the prior art;

2) ascertaining the differences between the prior art and the claims in issue;

3) resolving the level of ordinary skill in the pertinent art; and

4) evaluating evidence of secondary considerations.

See Graham v. John Deere, 383 U.S. 1 (1966); KSP International Co. v. Teleflex Inc., 550 U.S. ___ (April 30, 2007).

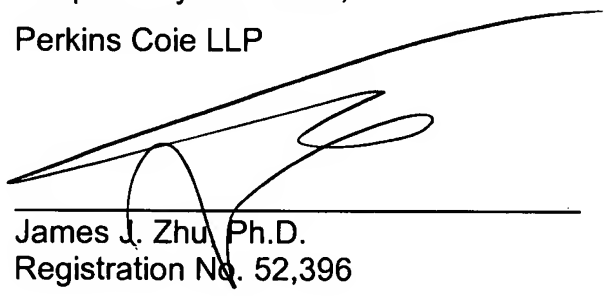
To the extent that the rejections may be applied to the amended claims, Applicant respectfully traverses. In particular, in ascertaining the differences between the prior art (e.g., Crimmins et al) and the claimed invention, Applicant notes that Crimmins et al. do not teach the same number of pulses for the two bits (See the discussion above). In other words, even the hypothetical combination of Crimmins et al. and Crowley would not arrive at the claimed invention.

Accordingly, Applicant respectfully requests that the rejections be reconsidered and withdrawn.

CONCLUSION

The claims are now in condition for allowance. A Notice of Allowance, is respectfully requested. If Applicant can do anything more to expedite this application, Applicant requests that the Examiner contact the undersigned at (310) 788-3219.

Respectfully submitted,
Perkins Coie LLP



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